

## **DEFINING TOOTH-MOVING APPLIANCES COMPUTATIONALLY**

### **ABSTRACT OF THE DISCLOSURE**

Methods and corresponding apparatus for segmenting an orthodontic treatment path into clinically appropriate substeps for repositioning the teeth of a patient include providing a digital finite element model of the shape and material of each of a sequence of appliances to be applied to a patient; providing a digital finite element model of the teeth and related mouth tissue of the patient; computing the actual effect of the appliances on the teeth by analyzing the finite elements models computationally; and evaluating the effect against clinical constraints. The appliances can be braces, polymeric shells, or other forms of orthodontic appliance.

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